COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF MARION COUNTY WATER DISTRICT, MARION AND NELSON COUNTIES, KENTUCKY, (1) FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING THE DISTRICT TO CONSTRUCT MAJOR IMPROVEMENTS AND EXTENSIONS TO ITS EXISTING MUNICIPAL WATER DISTRIBUTION SYSTEM PURSUANT TO THE PROVISIONS OF CHAPTER 74 OF THE KENTUCKY REVISED STATUTES; (2) SEEKING APPROVAL OF ADJUSTED WATER SERVICE RATES AND CHARGES; AND (3) SEEKING APPROVAL OF THE ISSUANCE OF CERTAIN SECURITIES	CASE NO. 10113

O R D E R

IT IS ORDERED that Marion County Water District ("Marion") shall file an original and seven copies of the following information with the Commission with a copy to all parties of record no later than February 19, 1988. If the information cannot be provided by this date, Marion should submit a motion for an extension of time stating the reason a delay is necessary and include a date by which it will be furnished. Such motion will be considered by the Commission. Marion shall furnish with each response the name of the witness who will be available at the public hearing for responding to questions concerning each item of information requested.

1. The computer hydraulic analyses filed in this case for the proposed water distribution system indicate that the potential exists for the system to experience high pressure (more than 150

psig) at Nodes 14, 15, 16, 24, 26 and 28. Pressures at this level are in violation of PSC regulation 807 KAR 5:066, Section 6(1). Provide details of any preventive measures or additional construction Marion intends to perform to protect against this type of occurrence. Details should be documented by hydraulic analyses and field measurements.

2. The engineering information submitted with the application indicates that Marion is proposing to install one fire hydrant as part of this project. KRS 227, the "Recommended Standards For Water Works" by the Great Lakes - Upper Mississippi River Board of State Sanitary Engineers ("Ten States Standards") and the Insurance Services Office ("ISO") all have requirements for providing fire protection. All of these references require fire hydrant installation on a minimum of six-inch diameter water lines. For residential construction, the ISO requires the capability to deliver between 500 and 1500 gallons per minute at a residual pressure of 20 pounds per square inch for a minimum of 2 hours from any fire hydrant. The Ten States Standards allow a fire hydrant on dead-end mains for flushing only if flow and pressure are sufficient. Otherwise an approved flushing hydrant or blow-off valve should be used. Based on the above, provide information as to the purpose of the proposed fire hydrant. If the purpose of the proposed fire hydrant is to provide fire protection, provide hydraulic analyses demonstrating the capability of Marion's system to comply with the requirements of KRS 227, the ISO and the Ten States Standards. If the fire

hydrant is proposed for reasons other than fire protection state why other equipment was not considered (e.g. blow-off valves, drain valves, etc.).

3. The computer hydraulic analyses filed in this case for both the existing and the proposed water distribution systems depict the Danville pump "operating out of range." This would indicate that this pump is unable to satisfy the system's hydraulic conditions as input. State whether this type operation actually occurs and if it does, state what preventive measures or additional construction Marion intends to perform to protect against this type of occurrence. In addition, provide pressure recording charts on the suction and discharge sides of this pump and any other measurements to demonstrate the actual operation of this pump station. The pressure recording charts should show the actual 24-hour continuously measured pressure available. Identify the 24-hour period recorded, the exact locations of the pressure recorders and the sea level elevations of the recorders. Also state the schematic junction numbers nearest the location of the pressure recorders.

4. The hydraulic analyses of the existing and proposed water distribution system depict a low pressure at junction 53. Junction 53 appears to represent the elevation of the high service pumps. It appears that the low pressure depicts the pressure on the suction side of the high service pumps. If this is correct low pressure would appear to be due to improper coding of the computer analysis and would not occur as long as the water level in the clearwell is always above the lowest stage of the vertical

turbine pump. Based on the above, provide clarification concerning this matter. (Note - if the pressure or lack thereof reflects an actual low pressure condition, provide details of any preventive measures or additional construction that will be utilized to protect against this type of occurrence. Details should be documented by hydraulic analyses and field measurements).

5. The computer hydraulic analyses filed in this case for the existing water distribution system indicate marginal pressures at Nodes 7 and 44. The computer hydraulic analyses also indicate marginal pressure on the proposed water distribution system at Node 7. Based on the above, provide information as to the frequency that this level of pressure will be experienced and the effect these marginal pressure areas will have on providing adequate and reliable service.

Done at Frankfort, Kentucky, this 20th day of January, 1988.

PUBLIC SERVICE COMMISSION

Richard D. Heman Jr.
For the Commission

ATTEST:

Executive Director